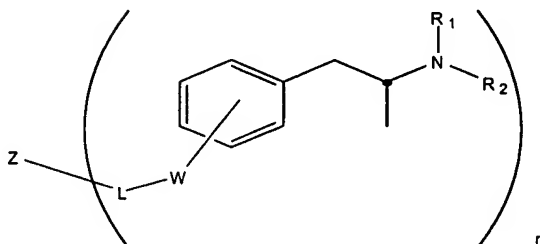


Claim Amendments

1. (currently amended) A compound of the formula:



wherein:

R^1 is H, lower alkyl, a protecting group,

R^2 is H, lower alkyl, a protecting group,

L is $-(CH_2)_t-X-(CH_2)_v-Y-$ wherein X is C(O) or SO_2 , Y is a bond, S or $-NR^3$ wherein R^3 is H or lower alkyl, W is O, S, or NH, and t is an integer from 1 to 6 and v is an integer from 0 to 6,

Z is H, a protecting group, a poly(amino acid), a non-poly(amino acid) label moiety, a non-poly(amino acid) immunogenic carrier, or a functional group excluding thiol,

n is 1 when Z is other than a poly(amino acid) or, when Z is a poly(amino acid), n is an integer between 1 and the molecular weight of the poly(amino acid) divided by 500;

and salts thereof.

2. (original) A compound according to Claim 1 wherein R^1 is H and R^2 is H.

3. (original) A compound according to Claim 1 wherein R^1 is H and R^2 is lower alkyl.

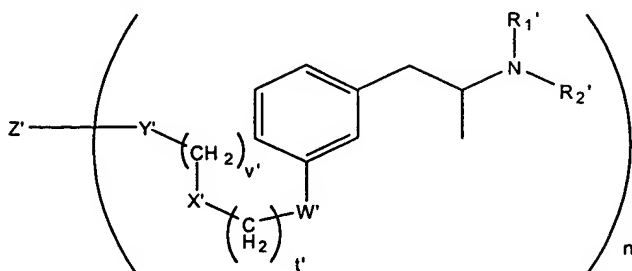
4. (original) A compound according to Claim 3 wherein lower alkyl is methyl.

5. (original) A compound according to Claim 1 wherein Z is a poly(amino acid).

6. (previously presented) A compound according to Claim 5 wherein said poly(amino acid) is an enzyme or a protein immunogenic carrier.

Claim 7 (canceled).

8. (currently amended) A compound of the formula:



wherein:

$R^{1'}$ is H, lower alkyl, a protecting group,

$R^{2'}$ is H, lower alkyl, a protecting group,

W' is O, S or NR^3 wherein R^3 is H or lower alkyl,

X' is C(O) or SO_2 ,

Y' is bond, S or $-NR^3$ wherein R^3 is H or lower alkyl,

Z' is H, a protecting group, a poly(amino acid), a non-poly(amino acid) label moiety, a non-poly(amino acid) immunogenic carrier, or a functional group,

t' is an integer from 1 to 6 and v' is an integer from 2 to 6,

n' is 1 when Z' is other than a poly(amino acid) or, when Z' is a poly(amino acid), n' is an integer between 1 and the molecular weight of the poly(amino acid) divided by 500;

and salts thereof;

~~wherein the compound is a stereoisomeric mixture that comprises at least 51% of one stereoisomeric form over the other.~~

9. (original) A compound according to Claim 8 wherein $R^{1'}$ is H and $R^{2'}$ is H.

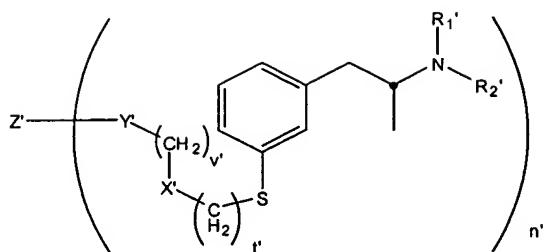
10. (original) A compound according to Claim 8 wherein $R^{1'}$ is H and $R^{2'}$ is methyl.

11. (original) A compound according to Claim 8 wherein Z' is a poly(amino acid).

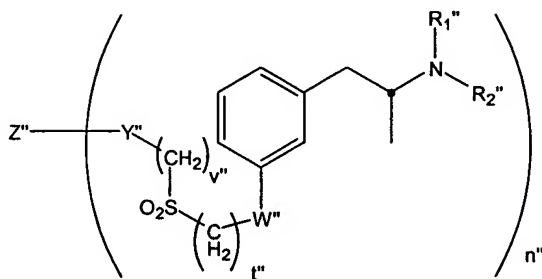
12. (previously presented) A compound according to Claim 8, wherein said stereoisomeric mixture comprises at least 90% of one stereoisomeric form over the other.

13. (original) A compound according to Claim 12 wherein said stereoisomer has the

formula:



14. (previously presented) A compound of the formula:



wherein:

$R^{1''}$ is H, lower alkyl, a protecting group,

$R^{2''}$ is H, lower alkyl, a protecting group,

W'' is O, S, or $NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

Y'' is bond, S or $-NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

Z'' is H, a protecting group, a poly(amino acid), a non-poly(amino acid) label moiety, a non-poly(amino acid) immunogenic carrier, or a functional group,

t'' is an integer from 1 to 6 and v'' is an integer from 2 to 6,

n'' is 1 when Z'' is other than a poly(amino acid) or, when Z'' is a poly(amino acid), n'' is an integer between 1 and the molecular weight of the poly(amino acid) divided by 500; and salts thereof.

15. (original) A compound according to Claim 14 wherein $R^{1''}$ is H and $R^{2''}$ is H.

16. (original) A compound according to Claim 14 wherein $R^{1''}$ is H and $R^{2''}$ is methyl.

17. (original) A compound according to Claim 14 wherein Z'' is an enzyme.

18. (original) A compound according to Claim 17 wherein said enzyme is glucose-6-phosphate dehydrogenase.

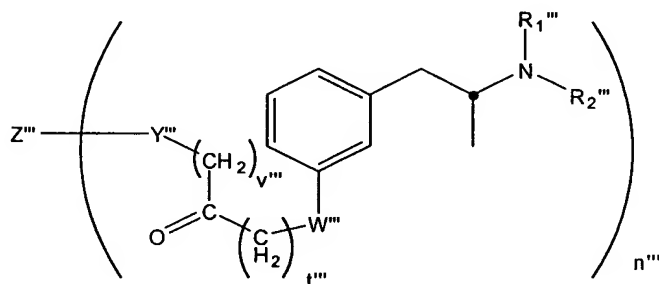
19. (previously presented) A compound according to Claim 14 wherein Z'' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier.

20. (original) An antibody raised against a compound according to Claim 19.

21. (original) A reagent system comprising a compound according to Claim 17, an antibody for amphetamine and/or an antibody for methamphetamine.

22. (original) A reagent system comprising an antibody according to Claim 20 and an enzyme conjugate of an amphetamine and/or an enzyme conjugate of methamphetamine.

23. (currently amended) A compound of the formula:



wherein:

R^{1'''} is H, lower alkyl, a protecting group,

R^{2'''} is H, lower alkyl, a protecting group,

W'' is O, S, or NR^{3'''} wherein R^{3'''} is H or lower alkyl,

Y''' is a bond, S or -NR^{3'''} wherein R^{3'''} is H or lower alkyl,

Z''' is H, a protecting group, a poly(amino acid), a non-poly(amino acid) label moiety, a non-poly(amino acid) immunogenic carrier, or a functional group,

t''' is an integer from 1 to 6 and v''' is an integer from 2 to 6,

n''' is 1 when Z''' is other than a poly(amino acid) or, when Z''' is a poly(amino acid), n''' is an integer between 1 and the molecular weight of the poly(amino acid) divided by 500; and salts thereof.

24. (original) A compound according to Claim 23 wherein $R^{1''}$ is H and $R^{2''}$ is H.
25. (original) A compound according to Claim 23 wherein $R^{1''}$ is H and $R^{2''}$ is methyl.
26. (original) A compound according to Claim 23 wherein Z'' is an enzyme.
27. (original) A compound according to Claim 26 wherein said enzyme is glucose-6-phosphate dehydrogenase.
28. (original) A compound according to Claim 23 wherein Z'' is an antigen or a non-poly(amino acid) immunogenic carrier.
29. (original) An antibody raised against a compound according to Claim 28.
30. (original) A reagent system comprising a compound according to Claim 26, an antibody for amphetamine and/or an antibody for methamphetamine.
31. (original) A reagent system comprising an antibody according to Claim 29 and an enzyme conjugate of an amphetamine and/or an enzyme conjugate of methamphetamine.
32. (original) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:
- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 21; and
 - (b) examining said medium for the presence of a complex comprising said amphetamine and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.
33. (original) A method according to Claim 32 wherein said examining comprises

measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

34. (original) A method according to Claim 33 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

35. (original) A method according to Claim 33 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

36. (original) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 22; and
- (b) examining said medium for the presence of a complex comprising said amphetamine and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.

37. (original) A method according to Claim 36 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

38. (original) A method according to Claim 37 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

39. (original) A method according to Claim 37 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

40. (original) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 30; and
- (b) examining said medium for the presence of a complex comprising said amphetamine and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.

41. (original) A method according to Claim 40 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

42. (original) A method according to Claim 41 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

43. (original) A method according to Claim 41 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

44. (original) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample and
 - (ii) a reagent system according to Claim 31; and
- (b) examining said medium for the presence of a complex comprising said amphetamine and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.

45. (original) A method according to Claim 44 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

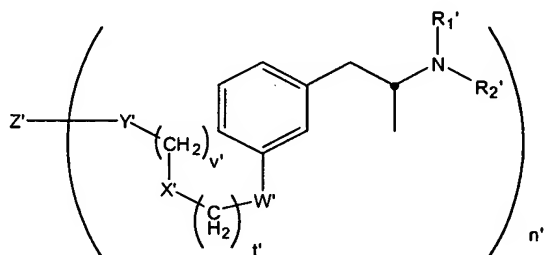
46. (original) A method according to Claim 45 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

47. (original) A method according to Claim 45 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

48. (currently amended) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:

(a) providing in combination in a medium:

- (i) said sample,
- (ii) an antibody for amphetamine,
- (iii) an antibody for methamphetamine,
- (iv) a compound of the formula:



wherein:

- $R^{1'}$ is H, lower alkyl, a protecting group,
- $R^{2'}$ is H, lower alkyl, a protecting group,
- W' is O, S, or $NR^{3'}$, wherein $R^{3'}$ is H or lower alkyl,
- X' is $C(O)$ or SO_2 ,
- Y' is bond, S or $-NR^{3'}$, wherein $R^{3'}$ is H or lower alkyl,
- Z' is an enzyme,

t' is an integer from 1 to 6 and v' is an integer from ≥ 0 to 6,

n' is an integer between 1 and the molecular weight of said enzyme divided by 500; and

(b) examining said medium for the presence of a complex comprising said amphetamine and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.

49. (original) A method according to Claim 48 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

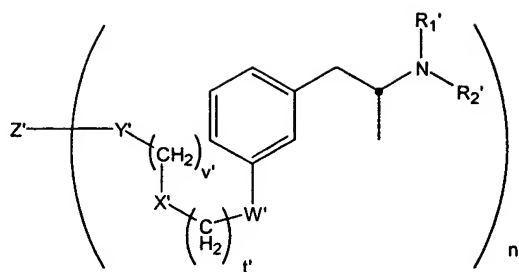
50. (original) A method according to Claim 49 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

51. (original) A method according to Claim 49 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

52. (original) A method according to Claim 48 wherein said enzyme is glucose-6-phosphate dehydrogenase.

53. (currently amended) A method for determining amphetamine and/or methamphetamine in a sample suspected of containing amphetamine and/or methamphetamine, said method comprising:

- (a) providing in combination in a medium:
 - (i) said sample,
 - (ii) a conjugate of an enzyme and an amphetamine analog and/or a conjugate of an enzyme and a methamphetamine analog,
 - (iii) an antibody for amphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H and $R^{2'}$ is H,

W' is O, S, or $NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

X' is $C(O)$ or SO_2 ,

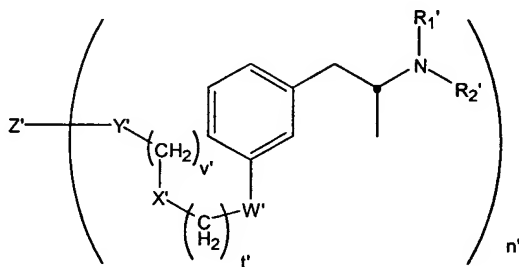
Y' is bond, S or $-NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

Z' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

t' is an integer from 1 to 6 and v' is an integer from ≥ 0 to 6,

n' is an integer between 1 and the molecular weight of said antigen or said immunogenic carrier divided by 500; and/or

(iv) an antibody for methamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$ is H and $R^{2'}$ is methyl,

W' is O, S, or $NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

X' is $C(O)$ or SO_2 ,

Y' is bond, S or $-NR^{3'}$ wherein $R^{3'}$ is H or lower alkyl,

Z' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

t' is an integer from 1 to 6 and v' is an integer from ≥ 0 to 6,

n' is an integer between 1 and the molecular weight of said antigen or said immunogenic carrier divided by 500; and

(b) examining said medium for the presence of a complex comprising said amphetamine

and said antibody for amphetamine and/or a complex of said methamphetamine and said antibody for methamphetamine, the presence thereof indicating the presence of said amphetamine and/or methamphetamine in said sample.

54. (original) A method according to Claim 53 wherein said examining comprises measuring signal from said enzyme, the amount thereof being related to the presence of said amphetamine and/or methamphetamine in said sample.

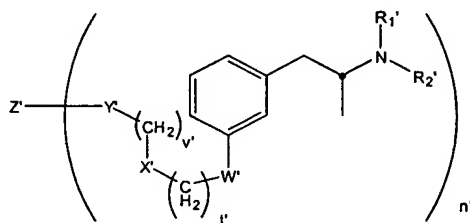
55. (original) A method according to Claim 54 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

56. (original) A method according to Claim 54 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium and said medium or said complex is examined for the amount of said signal.

57. (original) A method according to Claim 53 wherein said enzyme is glucose-6-phosphate dehydrogenase.

58. (currently amended) A kit comprising in packaged combination:

- (i) an antibody for amphetamine,
- (ii) an antibody for methamphetamine,
- (iii) a compound of the formula:



wherein:

- $\text{R}^{1'}$ is H, lower alkyl, a protecting group,
- $\text{R}^{2'}$ is H, lower alkyl, a protecting group,
- W' is O, S, or $\text{NR}^{3'}$ wherein $\text{R}^{3'}$ is H or lower alkyl,
- X' is $\text{C}(\text{O})$ or SO_2 ,

Y' is bond, S or -NR^{3'}, wherein R^{3'} is H or lower alkyl,

Z' is an enzyme,

t' is an integer from 1 to 6 and v' is an integer from $\underline{2}$ to 6,

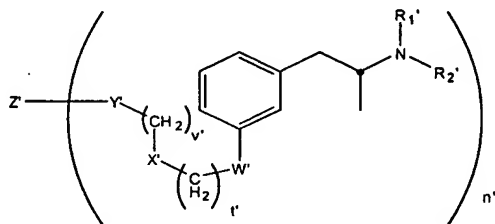
n' is an integer between 1 and the molecular weight of said enzyme divided by 500.

59. (original) A kit according to Claim 58 wherein said enzyme is glucose-6-phosphate dehydrogenase.

60. (currently amended) A kit comprising in packaged combination:

(i) a conjugate of an enzyme and an amphetamine analog and/or a conjugate of an enzyme and a methamphetamine analog,

(ii) an antibody for amphetamine, said antibody being raised against a compound of the formula:



wherein:

R^{1'} is H and R^{2'} is H,

W' is O, S, or NR^{3'}, wherein R^{3'} is H or lower alkyl,

X' is C(O) or SO₂,

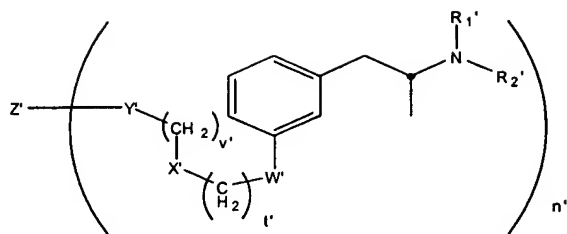
Y' is bond, S or -NR^{3'}, wherein R^{3'} is H or lower alkyl,

Z' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

t' is an integer from 1 to 6 and v' is an integer from $\underline{2}$ to 6,

n' is an integer between 1 and the molecular weight of said antigen or said immunogenic carrier divided by 500; and/or

(iii) an antibody for methamphetamine, said antibody being raised against a compound of the formula:



wherein:

R_1' is H and R_2' is methyl,

W' is O, S, or $NR^{3'}$, wherein $R^{3'}$ is H or lower alkyl,

X' is $C(O)$ or SO_2 ,

Y' is bond, S or $-NR^{3'}$, wherein $R^{3'}$ is H or lower alkyl,

Z' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

t' is an integer from 1 to 6 and v' is an integer from 2 to 6,

n' is an integer between 1 and the molecular weight of said antigen or said immunogenic carrier divided by 500.